

MEMORY DEVICE, STACK PROTECTION SYSTEM, COMPUTER SYSTEM,
COMPILER, STACK PROTECTION METHOD, STORAGE MEDIUM AND PROGRAM
TRANSMISSION APPARATUS

Abstract

A memory device is provided that is used by a computer system and that has a memory pattern obtained after a function is called when the computer system executes a program, the memory pattern comprising: a return address storage area for storing a return address 230 for the source of a call for the execution of a currently active function; a previous frame pointer storage area for storing a previous frame pointer 220 to the calling source for the execution of a currently active function; and a local variable storage area to be located below the return address storage area 230 and the previous frame pointer storage area 22, wherein when a data array 211 is stored in the local variable area, a guard variable 212 is stored in a location preceding the data array 211, and wherein the guard variable is used as a target to confirm whether the return address has been destroyed.